

What is claimed is:

1. A process for purifying inert gas removing at least one kind of impurities selected from oxygen, carbon dioxide and moisture contained in the inert gas which comprises contacting the inert gas with a purification agent comprises: a manganese oxide, and at least one kind of metal oxide selected from vanadium oxide, chromium oxide, iron oxide, tin oxide, zirconium oxide, bismuth oxide, niobium oxide and tantalum oxide as an effective component.

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2. A process for purifying inert gas removing at least one kind of impurities selected from oxygen, carbon dioxide and moisture contained in the inert gas which comprises contacting the inert gas with a purification agent comprises: a manganese oxide, and at least one kind of metal oxide selected from vanadium oxide, chromium oxide, iron oxide, tin oxide, zirconium oxide, bismuth oxide, niobium oxide and tantalum oxide as an effective component; and with a synthetic zeolite.

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3. A process for purifying inert gas removing at least one kind of impurities selected from oxygen, carbon dioxide and moisture contained in the inert gas which comprises contacting the inert gas with a purification agent comprises: a manganese oxide, and at least one kind of metal oxide selected from vanadium oxide, chromium oxide, iron oxide, tin oxide, zirconium oxide, bismuth

oxide, niobium oxide and tantalum oxide as an effective component; and further reproducing the purification agent by contacting a reproduction gas with the purification agent.

4. A process for purifying inert gas removing at least one kind of impurities selected from oxygen, carbon dioxide and moisture contained in the inert gas which comprises contacting the inert gas with a purification agent comprises: a manganese oxide, and at least one kind of metal oxide selected from vanadium oxide, chromium oxide, iron oxide, tin oxide, zirconium oxide, bismuth oxide, niobium oxide and tantalum oxide as an effective component; and with a synthetic zeolite; further reproducing the purification agent and the synthetic zeolite by contacting a reproduction gas with the purification agent and the synthetic zeolite.

5. The process for purifying inert gas according to any one of Claims 1 to 4, wherein a ratio between a number of manganese atom and a number of the entire metallic atoms of the effective component is 80 to 99%.

6. The process for purifying inert gas according to any one of Claims 1 to 4, wherein the content of said effective component is usually at least 70 % by weight in the entire purification agent.

7. The process for purifying inert gas according to any one of

Claims 1 to 4, wherein said manganese oxide is MnO , Mn_3O_4 , Mn_2O_3 or MnO_2 .

8. The process for purifying inert gas according to any one of Claims 1 to 4, wherein said purification agent is prepared by mixing solution containing manganese and solution containing at least one metal selected from vanadium, chromium, iron, tin, zirconium, bismuth, niobium and tantalum; coprecipitating to obtain precipitate; filtering and drying the resultant precipitate.

9. The process for purifying inert gas according to any one of Claim 2 or Claim 4, wherein said synthetic zeolite has a pore diameter in the range of 3 to 10 Å.

10. The process for purifying inert gas according to any one of Claims 1 to 4, wherein said inert gas is at least one selected from helium, nitrogen, neon, argon, krypton and xenon.

11. The process for purifying inert gas according to Claim 3 or Claim 4, wherein said reproducing is carried out by feeding an inert gas to said purification agent and subsequently by feeding hydrogen.

12. The process for purifying inert gas according to any one of Claims 1 to 4, wherein a temperature contacting said inert gas with said purification agent is lower than 150 °C.

13. The process for purifying inert gas according to Claim 2 or Claim 4, wherein a temperature contacting said inert gas with said synthetic zeolite is lower than 150 °C.

14. The process for purifying inert gas according to Claim 3 or Claim 4, wherein a temperature for reproducing said purification agent is 150 to 400 °C.

15. The process for purifying inert gas according to Claim 4, wherein a temperature for reproducing said synthetic zeolite is 150 to 350 °C.

16. The process for purifying inert gas according to Claim 3, wherein the purification of inert gas is intermittently carried out by deploying at least two lines of purification line containing the purification agent in order to supply highly pure inert gas continuously; and wherein the purification agent is intermittently reproduced by supplying a reproduction gas to the latter part of the purification line.

17. The process for purifying inert gas according to Claim 4, wherein the purification of inert gas is intermittently carried out by deploying at least two lines of purification line containing both the purification agent and the synthetic zeolite in order to supply high purity inert gas continuously; and wherein the purification

agent and the synthetic zeolite are intermittently reproduced by supplying a reproduction gas to the latter part of the purification line.